

Ecology: Rare. Growing along with *Caragana versicolor* Benth. at an altitude of c. 4,100 m.

Specimens examined: Uttar Pradesh, Farrukhabad, Mahmoodpur Sinauda (Tilia Garho), March 04, 1968, Ram Dayal 1968 T (DD); Himachal Pradesh, Lahaul-Spiti, Pin Valley National Park, Gechang-Thango, c. 4,100 m, July 15, 2002, K. Chandra Sekar 100450 (BSD, K).

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35. A NOTE ON THE IDENTITY AND RANGE EXTENSION OF *RICCIA GROLLEI* UDAR¹

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During the survey of bryophytes in and around the National Thermal Power Corporation, Unchahar in the Raebareli district of Uttar Pradesh, we collected and identified a species *Riccia grollei* Udar, which was the only liverwort growing in the pollution stressed environment of Unchahar. The species has extended its distribution from southern India, central India and Rajasthan to the Gangetic Plains of northern India (Parihar *et al.* 1994). It was first reported by Pande and Udar (1958) from southern India, and was named *Riccia tuberculata* Pande *et* Udar, but was later found to be a homonym of *Riccia tuberculata* Lamarck *et* Poiret. Hence, Udar (1965) adopted a new name, i.e. *Riccia grollei* Udar.

The diagnostic feature of the species is the presence of tuberculate thickening on a few cells of photosynthetic filaments. The tendency to synthesize food is thought to be great in this species, as the chloroplasts are not confined to the photosynthetic zone, but can also be seen in the cells of the storage zone. In the specimens collected from the vicinity of the NTPC, Unchahar, Raebareli, the spores do not possess the tri-radiate mark and wing, which were present on the specimens reported by Udar from southern India. A brief note on the identity and occurrence of this species is given below:

Riccia grollei Udar Curr. Sci. 34: 126 (1965)

Plants 0.2-0.5 cm long, 0.2-0.3 cm wide, green, mono or bifurcate overlapping, apex rounded, fingerprint-like

impression on the dorsal surface of thallus; rhizoids brown, both type simple and tuberculate in ratio 9-12: 6-10 in each transverse section of thallus; scales feebly developed, light brown; photosynthetic filament 220 µm long, 5-8 cells in one filament, hyaline cell 39-40 µm, filaments very compact with characteristic tuberculate thickening very prominent on cells of some filaments; air pore simple 10-12 µm; chloroplasts numerous in green cells of photosynthetic filaments and in storage zone; neck of archegonia 130 µm, venter 80 µm; young spores yellowish brown, mature dark brown, 81-90 µm along diameter; isopolar, reticulate, 4-6 angled, tri-radiate mark absent, 07-08 reticulations along diameter, size of one reticulation 10-14 µm, wings absent.

Specimen examined: ERC 3/2002 Coll & Det.: Adarsh Kumar and Shazia Kazmi.

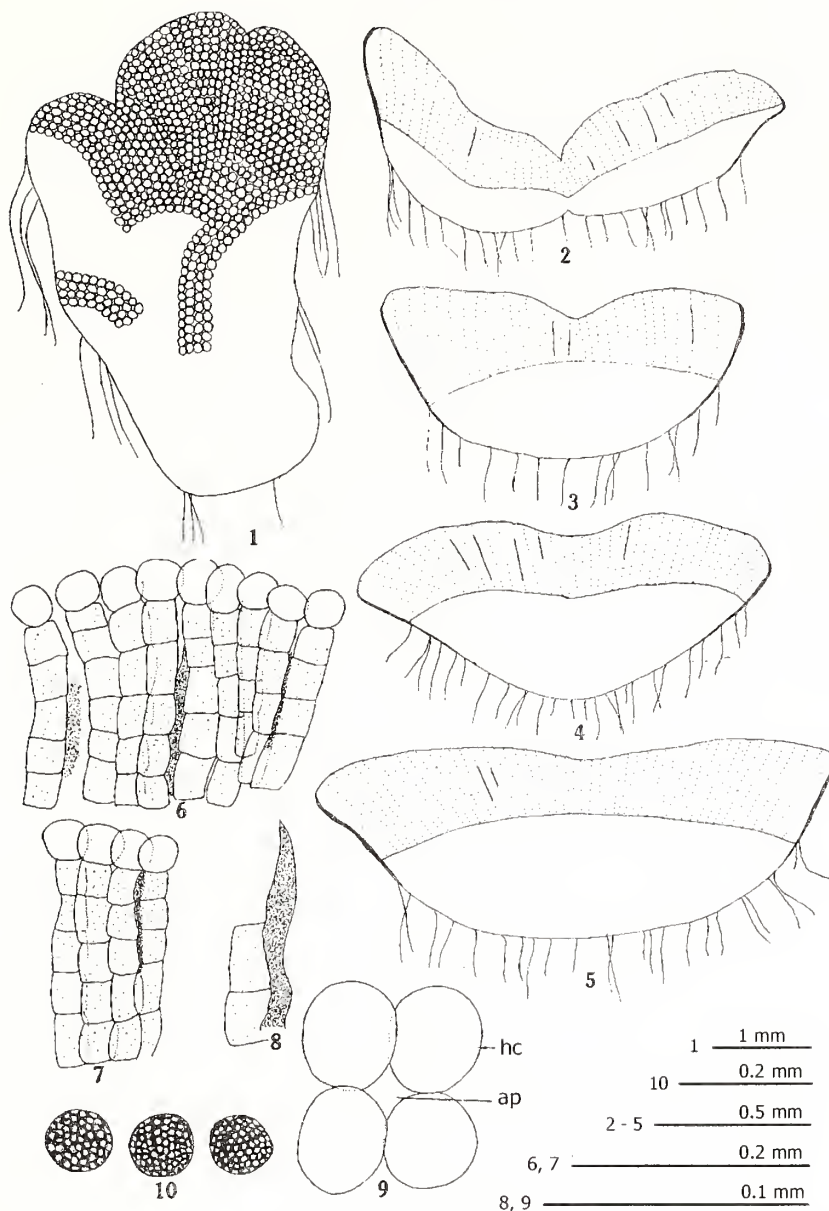
Location: Village Kaithaul, ca 5 km south of the National Thermal Power Corporation, Unchahar, Raebareli district, Uttar Pradesh; 16.viii.2002.

Distribution: INDIA: Runnymede, Madras State, southern India; central India; Rajasthan.

Remarks: Very rare, found sporadically on cemented walls.

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Figs. 1-10: *Riccia grollei* Udar: 1: Thallus, dorsal; 2-5: T.S. of thallus at the apex, behind the apex, in the middle and at the base respectively; 6-7: Photosynthetic filament showing characteristic tubercular thickenings; 8: Enlarged portion of thickening; 9: Hyaline cells (hc) showing airpore (ap); 10: Spores, showing reticulations

Botany, University of Lucknow, for confirming the identification of the plant specimen. We are also grateful to

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